



City and County of the City of Chester.

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# ANNUAL REPORT

TO THE MAYOR, ALDERMEN AND  
COUNCILLORS OF THE CITY AND  
COUNTY OF THE CITY OF CHESTER

ON THE

## HEALTH OF THE CITY

IN 1931,

BY

D. RENNET, M.B.E., M.D., D.P.H.,

Medical Officer of Health.



## Public Health Committee (1930-31).

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<i>Chairman</i>	-	-	-	ALDERMAN W. CARR.
<i>Deputy-Chairman</i>	-	-	-	ALDERMAN C. P. COCKRILL.
<i>followed by</i>	-	-	-	COUNCILLOR C. SCONCE.

### Members:

ALDERMAN S. R. A. WALL.	COUNCILLOR J. W. MARRIOTT.
„ A. S. DUTTON.	„ J. M. SIMON.
COUNCILLOR S. R. FEARNALL.	„ R. W. DUNN.
„ I. S. FOX.	„ S. G. DUTTON.
„ ELSIE WELSH.	„ J. T. DUNNE.
„ J. C. DALTON.	„ E. E. ASHTON.

COUNCILLOR ELIZABETH E. PENFOLD.

THE MAYOR (COUNCILLOR J. MORRIS) is an *ex-officio* Member  
of all Committees of the Council.

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## Public Health Officers.

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### WHOLE TIME.

Medical Officer of Health, School Medical Officer, Medical Superinten- dent, Infectious Disease Hospital, and Tuberculosis Officer .....	D. Rennet, M.B.E., M.D., D.P.H.
Assistant Medical Officer of Health and Assist. School Medical Officer, etc. ....	James W. Lobban, M.A., M.D., D.P.H.
*†Chief Sanitary Inspector, Food In- spector, Factory Acts Supervision ..	S. H. Moore, F.S.I.A., C.R.S.I.
*†Assistant Sanitary Inspector, and Food Inspector .....	W. B. Calder, M.S.I.A., C.R.S.I.
District Sanitary Inspector .....	J. Buckley, C.R.S.I.
Assistant District Inspector .....	H. J. Hewitt, M.S.I.A.
†Housing Inspector (holds also Meat Inspection Certificate) .....	M. G. H. Tresidder, C.R.S.I.
†Abattoir Superintendent .....	J. H. Withington, M.S.I.A.

## Public Health Officers—continued.

Health Visitors, Maternity and Child Welfare, Tuberculosis, Care of the Blind and Mental Deficiency and School Nurse and respective Clinics Each one for a district in the City ...	<p>C. V. Rochford, C.M., C.R.S.I. E. Brayne, C.M., G.T. L. Robson, C.M., C.R.S.I., G.T. A. E. Austin, S.R.N., C.M. Z. K. Wilkins, S.R.N., C.M., H.V.C.</p>
Chief Clerk .....	F. Thomas.
Assistant Clerk .....	T. R. Blythe, M.S.I.A., Cert. Liv. Un. San. Sc.
Assistant Clerk (Part time) .....	E. W. Bushell, C.S.I.B., Cert. Liv. Un. San. Sc. Succeeded by W. H. Wilkinson
Assistant Clerk and Laboratory Attendant (Part time) .....	W. H. Wilkinson. Succeeded by A. H. S. Lewis.
Medical Superintendent, City Hospital	J. L. Browne, M.B., Ch.B.
Public Assistance Officer .....	G. S. N. Hull.
District Relieving Officer and Vaccination Officer .....	F. Butler.
District Relieving Officer and Vaccination Officer .....	C. Brown.
Matron, Isolation Hospital .....	Miss L. Taylor, G.T.
Matron, St. James's Hospital .....	Miss Moss, G.T.
PART TIME.	
Venereal Diseases Officer .....	A. B. Paul, M.A., M.B., B.C.
Venereal Diseases Officer .....	J. N. Adam, F.R.C.S. (Edin.).
Medical Officer, Maternity and Child Welfare Clinic .....	M. T. Place, M.B., Ch.B., D.P.H.
Medical Officer, Ante-Natal Clinic ....	M. T. Place, M.B., Ch.B., D.P.H.
School Dentist .....	C. L. Wade, L.D.S.
Public Vaccinator .....	R. A. D. Pope, B.A., M.D.
Medical Officer, Public Assistance ...	R. A. D. Pope, B.A., M.D.
Consultant—Puerperal Fever, etc. ...	A. McMurray, F.R.C.S. (Edin.).
Public Analyst .....	<p>W. Foulkes Lowe, A.R.S.M., F.I.C. Harold Lowe, M.Sc., F.I.C.</p>
Veterinary Surgeon .....	H. H. Aldred, M.R.C.V.S.

\* Certificate Royal Sanitary Institute, Meat and Food Inspection.

† Certificate Liverpool University, Meat and Food Inspection.

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# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

For the Year 1931.

### STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (in acres) .....	2862
Population (Registrar General) middle 1931 .....	41,380
Corrected Population .....	41,524
Number of inhabited houses end of 1931, from Rate Books .....	9,895
Rateable Value .....	£298,155
Sum represented by a Penny Rate .....	£1,170

Chester is chiefly a business centre for the neighbouring parts of the Counties of Cheshire and Flint. There are no offensive or dangerous trades; the chief forms of employment being shop assistants, railway workers, engineers and tobacco workers. There is no evidence of undue illness in any particular form of employment.

The following are extracts from the vital statistics of the year :—

The population given by the Registrar General does not allow for Chester residents enumerated outside our boundary or non-residents inside our limits. Making the necessary correction the population at the middle of the year was 41,524, that is 610 more than in 1930.

Our rate of growth has considerably diminished. Between 1911 and 1921 the average yearly increase was 176, and between 1921 and 1931 only 58. This decrease is almost entirely accounted for by the Chester residents now living just outside our boundary.

		Total.	M.	F	Rate per 1,000 Population.
<b>Live Births</b> }	Legitimate	638	345	293	} Birth-rate 16.11
	Illegitimate	33	16	17	
Still-births, rate per 1,000 total births .....					46.8
Deaths (crude) .....					13.1
Deaths (corrected) .....					12.47
Deaths from diseases and accidents of pregnancy and parturition—					
from sepsis .....					0.024
from other causes .....					0.048

Death rates of infants under 1 year of age—

All infants per 1,000 live births .....	68.5
Legitimate infants per 1,000 legitimate births .....	68.9
Illegitimate infants per 1,000 illegitimate births .....	60.6
Deaths from Measles (all ages) .....	0.0
Deaths from Whooping Cough (all ages) .....	0.048
Deaths from Diarrhoea (under 2 years) .....	0.120

*The Birth-rate.*—The birth-rate is the lowest yet recorded in Chester, being 16.1 compared with 16.3 in 1930. The progressive fall is shown by the following figures :—

#### BIRTH-RATES.

	England and Wales,	Smaller Towns,	Chester
1927 .....	16.7	16.4	16.5
1928 .....	16.7	16.6	16.9
1929 .....	16.3	16.0	17.2
1930 .....	16.3	16.2	16.3
1931 .....	15.8	15.6	16.1

#### STILL-BIRTHS.

There were 50 still births registered during the year, but only 33 of those belonged to Chester. The rate is 46.8 per 1,000 total births—live and still births together, or 0.79 per 1,000 population.

In 6 cases only was it the first child which was lost and in 7 cases there had been previous miscarriage or still birth. The apparent cause seems to have been ill-health of mother 5, accident to mother 2, accident of parturition 5, abnormality of the child 2, and in one case a triplet pregnancy.

*Infant Death-rate.*—The infant death rate has only once been lower—59 in 1928. It is 68.5 for 1931. The chief causes of death were prematurity or debility, which accounted for almost half the deaths, pneumonia accounted for 4, tuberculosis disease for 5, and diarrhoea for 4.

The position of Chester is shown in the following table :—

#### INFANT DEATH RATES.

	England and Wales.	Smaller Towns.	Chester.
1927 .....	69	68	70
1928 .....	65	60	59
1929 .....	74	69	78
1930 .....	60	55	72
1931 .....	66	62	68.5



## GENERAL DEATH RATE.

The deaths of Chester residents numbered 546 during the year, 285 males and 261 females.

The death rate is 13.1 (crude) which on being corrected for differences in population becomes 12.5. It was lower in 1926 (12.4), 1927 (11.87), and in 1928 (10.8).

Infectious diseases were much less fatal, having caused 6 deaths only compared with 34 in 1930. There were no deaths from enteric fever, measles, or scarlet fever. There were 2 deaths from whooping cough and 4 from diphtheria.

Influenza caused 13 deaths compared with 3 in the previous year. There was a slight increase in deaths from tuberculosis of the respiratory system and deaths from other tuberculous diseases were doubled, 15 out of 18 being children under 5 years of age. Deaths from cancer increased from 51 to 66, while heart disease caused 103 deaths compared with 115. Deaths from respiratory diseases numbered 49 compared with 79 in the previous year. There was also an increase in the deaths from nephritis from 24 to 34.

As regards deaths in different age groups, there is a decrease at all ages under 15 years, from 15 to 45 the numbers are practically the same, while from 45 to 75 they are less and only the age group 75 years and upwards shows an increase.

Our position as regards death rates is shown in the following table:—

	England and Wales.	Smaller Towns.	Chester.
1927 .....	12.3	11.3	12.1
1928 .....	11.7	10.6	10.5
1929 .....	13.4	12.3	14.38
1930 .....	11.4	10.5	13.4
1931 .....	12.3	11.3	12.5

The death rate is 1 per 1,000 less than last year, but it was lower both in 1927 and 1928.

The death rates have been re-calculated in relation to the more accurate estimate of population.

The mean age at death during the year was 52.6 years, being 51.3 for males and 54.0 for females.

Our death rates from infectious diseases are given in the following statement along with those for England and Wales and the smaller Towns :—

	Enteric Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Diarrhoea under 2 years per 1 000 births
England and Wales	0·01	0·08	0·01	0·06	0·07	0·36	6·0
Smaller Towns ...	0·00	0·07	0·01	0·05	0·05	0·36	4·0
Chester ... ..	0·00	0·00	0·00	0·05	0·09	0·31	7·4

Except for diarrhoea in children under 2 years of age and to a less extent diphtheria, none of the infectious diseases caused a greater proportion of deaths than in the rest of the country.

The prevalence of those diseases in Chester compared with England and Wales is shown below :—

*Notification of Infectious Diseases per 1,000 population.*

	Enteric Fever.	Scarlet Fever.	Diphtheria.	Puerperal Fever.	Puerperal Pyrexia.
England and Wales	0·06	2·05	1·27	0·06	0·14
Chester ... ..	0·04	1·42	2·23	0·09	0·16

Calculated on 1,000 total births, the puerperal fever rate is 5.6 compared with 3.55 for England and Wales, and the rate for puerperal pyrexia 11.3 compared with 8.7.

Diphtheria is still more prevalent in Chester than in the rest of the country as a whole, but the position is much improved. The incidence of puerperal fever is also slightly high.

There was also notified 132 cases of whooping cough, the beginning of an epidemic which had increased during the present year.

Ophthalmia neonatorum was notified 7 times and cerebro-spinal meningitis twice, one of which died.

Puerperal pyrexia was notified eight times and there were two deaths. One case was an instrumental delivery and another a malpresentation requiring much manipulation, and another a placenta previa requiring cæsarian section. In the others no apparent cause could be found. With two exceptions, they were treated at home. They were all seen by the official consultant.

Puerperal fever was notified four times with one death. The fatal case had formerly had puerperal fever, but had apparently made a complete recovery. She however developed temperature during

labour, which was induced, and died in a few days. The other three cases recovered. The causes of their trouble were one retained placenta one vaginal discharge before confinement and torn perinaeum. The other case on admission to hospital showed only a pleuro-pneumonia which may or may not have been due to puerperal causes. The pneumococcus was cultivated from a cervical swab.

## GENERAL PROVISION OF HEALTH SERVICES IN THE CITY.

1. *Public Health Officers*—(See front page).

2. *Nursing in the Home*—

(a) The District Nursing Association has nurses employed in the nursing of patients in their homes. A large amount of valuable and highly appreciated work is done. Patients are referred to the Association by the Health Department as occasion arises.

(a) At times of epidemic sickness the Association helps in the nursing of such illnesses as Measles and Whooping Cough in the homes, and for this service a fee of £50 per annum is paid by the Education Authority.

Details of the work done by the Health Visitors are given below :—

Total number of births notified .....	882
(of these 15 were notified late ; 7 by doctors and 8 by midwives)	
Cases attended and delivered by doctors .....	87
Cases attended and delivered by Midwives .....	795
Number of Still-births .....	50
(Midwives' cases 42, doctors' 8) ; 33 cases belonged to Chester.	

The Health Visitors made the following visits :—

Primary birth visits .....	695
Return visits .....	3481
Visits to children (1—5 years) .....	6686
Visits to expectant mothers .....	720
Other visits .....	2676
Visits to Midwives .....	46

Of the 795 births attended by midwives in 107 cases some condition arose requiring the calling in of medical help either for the mother or infant. This is an increase of 24 over last year.

The reasons for requiring help were as follows:—

Feebleness of child .....	12
Prolonged labour or malpresentation .....	14
Complications before labour .....	11
Complications during labour .....	15
Complications after labour .....	11
Rise of temperature .....	3
Discharge from the eyes .....	3
Deformity of infant .....	3
Lacerated perinæum .....	27
Abortion .....	2
Skin Affections .....	3
Prematurity .....	2
Patient's own request .....	1

There were 50 still births registered in Chester during the year, particulars have been given earlier in the report.

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#### MILK (MOTHERS AND CHILDREN) ORDER, 1918.

Milk has been supplied free to 2,418 applicants during the year, 699 more than in 1930. 133 of above number were first applications, the others were renewals.

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#### NOTIFICATION OF BIRTHS ACT.

The number of births not notified until the omission was pointed out has decreased by 15 in the year.

*Dental Clinic.*—Nursing and expectant necessitous mothers are supplied with dentures through the dental clinic, either free or on part payment. This arrangement has not been taken advantage of during the year.

*The School Clinic* is an important part of Public Health work and here an endeavour is made to make parents realise and assume their responsibilities in the treatment of minor ailments. About a third of the work done here should be undertaken by the parents.

#### BLIND PERSONS ACT, 1920.

The care of the blind in Chester has been delegated to the Chester Society for the Home Teaching of the Blind. The Local Authority have adopted a scheme for regulating the financial assistance given to them and their position has been improved during the year. A general supervision of the work of the Society in Chester is undertaken by the Local Authority and the homes of the blind visited and their comfort seen to as far as possible. The Local Authority have two representatives on the Committee of Management.

There were 82 persons on the register at the end of the year and the Local Authority paid to the Society £1,125 in the year and have estimated £1,592 for the current year. There have been 29 licences issued for wireless sets to blind people.

3. *Midwives*.—There are 21 midwives practising in the City, nine of which work under the auspices of the Benevolent Institution and Maternity Home, two doing outside work. All the midwives are certified and none are subsidised by the Local Authority. Their homes are visited quarterly, and registers, ante-natal records and home conditions examined by the senior health visitor. All midwives are seen, with their bags, registers and notes, once a year by the Medical Officer and on special occasions as necessary.

Under the provisions of the Midwives Act, the Local Authority paid the whole or part of the doctor's fee when called in by a midwife in 38 cases, a decrease of 26 from last year.

*Artificial Feeding*.—The notification of the adoption of artificial feeding is very badly carried out, there having been only 24 such notifications received during the year.

4. *National Health Insurance*.—Except in the certification of fitness or unfitness for work in patients suffering from tuberculous diseases and post diphtheritic conditions, there is no other connection with National Health Insurance.



## POOR LAW MEDICAL OUT-RELIEF.

The amount of out-relief for the year ending December, 1931, was—

Ordinary cases .....	£7,898 : 12 : 2
Able-bodied cases .....	£609 : 11 : 2

The average number of recipients per week was as follows :—

	Men.	Women	Children.	Persons	Cases.
Ordinary cases	114	252	202	568	310
Able-bodied cases	13	12	30	55	13

The average weekly numbers in the Institutions were :—

	Men.	Women.	Children.	Total.
Hospital	41	44	19	104
Institution	62	32	—	94
Children's Home	—	—	13	13

There are in addition to the above 34 certified mental defectives in a special block attached to the Hospital. The average of County cases in the Hospital is 22 and in the Institution 13.

6. The Municipality has its own laboratory in which suspected material is examined sent by practitioners in the district or arising in the work of the infectious disease hospital or the municipal clinics. The work done in the municipal laboratory includes the examination of throat, and nose swabs for detection of the diphtheria bacillus, or hæmolytic streptococci, smears for the gonococcus, sputum for the tubercle bacillus or other organisms, blood counts or the examination of blood for the Widal reaction in suspected typhoid or the paratyphoid fevers, the examination of urine for various organisms, or for routine examination for the presence of sugar, albumen or blood.

In addition, samples of milk are examined bacteriologically every week and those samples showing counts over the standard are the subject of advice or warning to the vendor or producer. In this way 140 or 150 milk samples are examined each year.

Fortnightly bacteriological examinations of the water supply are also made, each individual filter bed, the mixed waters and water from a consumers tap being examined.

A chemical examination of the water is made each month.



The following is a statement of the work done during the year—

### LABORATORY WORK, 1931.

Material.	Examined for	Positive.	Negative.	TOTAL.
Swabs, Nose or Throat	Diphtheria bac. ...	151	1018	1169
Sputum ...	Tubercle bacillus ...	106	136	242
Urine ...	Routine ...	*5	†13	18
" ...	Casts and Organisms ...	2	0	2
" ...	Para Typhoid ...	0	4	4
Milk ...	Tubercle bacillus ...	...	2	2
Fæces ...	Typhoid bacillus ...	...	4	4
Blood ...	Widal reaction ...	3	8	11
" ...	Organisms ...	...	2	2
" ...	Pernicious Anaemia ...	...	1	1
" ...	Pneumococci ...	2	...	2
Eye Smears ...	Gonococci ...	2	1	3
Smears ...	Gonococci ...	1	8	9
Swabs ...	Streptococci ...	3	6	9
" ...	Vincent's Angina ...	...	2	2
Pus ...	Organisms ...	1	...	1
Hair ...	Ringworm ...	...	1	1
Pus ...	Tubercle ...	...	1	1
Swab Eye ...	Organism ...	1	...	1
Cerebro Spinal Fluid...	Meningococci ...	3	...	3
Pleural Fluid ...	Pneumococci ...	1	...	1
Totals ...		281	1207	1488

\* Abnormal.

† Normal.

A vaccine was prepared from an infected urine and another was examined for both tubercle and bacillus coli.

In addition to the above the routine examinations of the City water supply and of samples of milk for bacterial content were as follows :—

Routine chemical examinations of water .....	12
Routine bacteriological examinations of City water .....	227
Routine examinations of milk for bacterial content .....	144

#### 7. Legislation in Force.

#### LIST OF ADOPTIVE ACTS, BYE-LAWS AND LOCAL REGULATIONS IN FORCE IN THE DISTRICT.

Chester Improvement Acts, 1845, 1884.

Baths and Washhouses Act, 1846—1899.

Baths Bye-laws (1907).

Public Improvements Acts, 1860.

Houses and Parts of Houses Let in Lodgings Regulations, 1867.

Bye-laws as to Obstructions, Encroachments and Nuisances, 1879.

- Bye-laws under the Dairies, Cowsheds and Milkshops Order, 1885, 1904.  
 Bye-laws in respect of Nuisances, 1887.  
 Public Health Acts Amendment Act, 1890.  
 Infectious Diseases (Prevention) Act, 1890.  
 Private Street Works Act, 1892.  
 Isolation Hospital Rules (1901).  
 Public Health Acts Amendment Act, 1907—Parts II., III., IV., V., VI. and X.  
 Bye-laws for the Regulation of Common Lodging Houses, 1909.  
 Bye-laws for the Regulation of Slaughterhouses, 1909 and 1922.  
 Public Health (Prevention and Treatment of Diseases) Act, 1913.  
 Rats and Mice (Destruction) Act, 1919.  
 Public Health (Tuberculosis) Act, 1921.  
 Bye-laws for the Regulation of Slaughterhouses provided by the Council, 1925.  
 Tuberculosis Order, 1925 (C.D.A.A.).  
 City of Chester (Measles and Whooping Cough) Regulations, 1925—S.R.O., 1925, No. 1130.  
 Public Health Act, 1925, except Sections 17, 18, 19, 20, 34 and 56.  
 City of Chester (Public Health, etc.) Order, 1926 (adopting Public Health Acts Amendment Act, 1907, and repealing certain Sections in Acts of 1845 and 1884.  
 Nursing Home Bye-laws (1928).  
 Chester Corporation Act, 1929.

## 8. Hospitals.

(a)

Name.	Situation.	Purpose.	No. of Available Beds.	Proportion used by City Residents.	Management
Chester Royal Infirmary	City ...	General ...	211	$\frac{1}{3}$	Voluntary Agency
City Hospital	... City Boundary	General ...	336	$\frac{5}{6}$	Local Authority
Maternity Hospital...	Centre of City...	Maternity ...	8	$\frac{5}{9}$	Voluntary Agency
Cheshire Joint Sanatorium	Market Drayton	Pulmonary Tuberculosis	250	$\frac{1}{30}$	Joint Committee
Shropshire Orthopaedic Hospital	Gobowen	Non-Pulmonary Tuberculosis and other crippling conditions	300 approx.	$\frac{1}{18}$	Voluntary Agency
Isolation Hospital ...	1 mile from City	Infectious Diseases	64	$\frac{5}{6}$	Local Authority
Tuberculosis Pavilion, Sealand	1 mile from City	Advanced Tuberculosis and Non-Pulmonary Children	26	$\frac{5}{6}$	Local Authority
Smallpox Hospital ...	1 mile from town	Smallpox ...	10	—	Local Authority

The Nursing Staffs of the hospitals under the management of the Local Authority are composed as follows:—Chester City Hospital—One Matron, an Assistant Matron, Home Sister, Seven Day Sisters, Two Night Sisters, 30 Probationer Nurses and 4 Male (Uncertificated) Nurses. The Probationers finish their training at Birkenhead. Isolation Hospital and Tuberculosis Pavilion—Matron, Four Sisters, Two Staff Nurses and 14 Probationers. The Probationers finish their training at Monsall Hospital, Manchester. Smallpox Hospital—Staffed from Isolation Hospital when necessary.

The arrangement regarding the Medical Staffing and Consultants at the City Hospital are not yet complete. At the Isolation Hospital a Consultant from the Chester Royal Infirmary can be had when required.

(b) The location and amount of accommodation for various conditions is given where possible in the following table:—

			Chester Royal Infirmary.	City Hospital.	Chester Maternity Hospital.	Cheshire Joint Sanatorium.	Shropshire Orthopaedic Hospital.	Isolation Hospital Chester.
General Medical	...	M	14	46	—	—	—	—
"	...	F	14	31	—	—	—	—
General Surgical	...	M	61	53	—	—	—	—
"	...	F	52	46	—	—	—	—
Children	...	...	26	32	—	—	—	—
Maternity	...	...	—	12	8	—	—	—
Venereal Diseases	...	M	4	—	—	—	—	—
"	...	F	4	—	—	—	—	—
Tuberculosis Pulmon.	...	...	—	—	—	8*	—	18
" Non-Pulmon.	...	...	—	—	—	—	†	8
Chronic Sick	...	M	—	38	—	—	—	—
"	...	F	—	38	—	—	—	—
Mental Defective	...	...	—	40	—	—	—	—
Orthopaedic	...	...	—	—	—	—	†	—
Ear, Nose and Throat	...	M	5	—	—	—	—	—
"	...	F	5	—	—	—	—	—
Ophthalmia Neonatorum	...	...	—	—	—	—	—	—
Ophthalmic	...	M	6	—	—	—	—	—
"	...	F	6	—	—	—	—	—
Infectious Diseases	...	...	—	—	—	—	—	64

\* Beds used by Chester Local Authority. † Beds given as required

The Royal Infirmary is fully staffed, with special departments in radiology, nose and throat, ophthalmology and gynæcology, and also for the treatment of cancer by radium. There are 211 beds. During the year a Psychiatric Clinic was opened and meets weekly on Thursdays

at 3 p.m. Up to the end of the year 41 patients had attended, 17 of those belonging to Chester. Beds required by the clinic can be had by arrangement with medical staff.

*The City Hospital (formerly St. James's Hospital).*—Unfortunately it has not been possible to arrange the re-staffing and equipment of this hospital. It has been agreed between the medical and surgical staffs of the Royal Infirmary and the City Hospital and the Medical Officer of Health, that medical and surgical cases not requiring expensive equipment for their diagnosis and treatment would be treated at the City Hospital and that medical practitioners would be free to send patients to either hospital. It is hoped that in the development of the Hospital the claims of rheumatic and other ailing children will receive a large measure of attention. Those cases require beds for long periods which the Royal Infirmary are hardly in a position to supply. Preventive medicine also ought to figure largely in the programme of any municipal hospital. It ought to become a centre for the spread of health knowledge, showing films and giving talks on healthier living.

#### ISOLATION HOSPITAL.

There are 64 beds for infectious diseases in four block of buildings, with 10 wards, and 18 beds for pulmonary tuberculosis (10 male and 8 female) and 8 beds for non-pulmonary tubercle in children.

There is also a discharge block and an efficient and up-to-date laundry and disinfecting station and a mortuary.

The staffing is efficient and comprises:—Matron, four Sisters, five staff nurses and 12 probationers with an adequate domestic and laundry staff, ambulance driver and engineer.

Three hundred and fifty-seven patients were admitted during the year, 188 being Chester residents and 169 from other neighbouring authorities, almost 50 per cent.

Diphtheria has been again the most prevalent disease, but the numbers are considerably less than for the last two years. The decrease in prevalence was most noticable in Chester, the numbers admitted from other authorities showing little reduction or a slight increase. Eighty-three cases were admitted from the City compared with 108 in the previous year. There were 5 deaths. The virulence of the disease, as well as the prevalence, is less. Cases are still being sent to hospital late in the disease. During the year medical practitioners were reminded of the arrangement by which anti-toxin could be got free for necessitous cases, and this has been taken advantage of on two or three



occasions. Eighty-five cases were admitted from outside districts compared with 56 in the previous year. Some of those cases were admitted very late with little hope of recovery. There were 6 deaths.

Scarlet Fever. Fifty-nine were admitted from the City compared with 70 in 1930, and 68 from outside districts compared with 71. The type of disease continues mild, and there were no deaths.

Five cases of puerperal fever or puerperal pyrexia were admitted. There was one death. Those cases have been commented on already in this report.

The other cases admitted included three cases of cerebro-spinal meningitis (one being from the City), one of poliomyelitis and one of tuberculous meningitis, both from outside.

Four cases were admitted and treated for scabies.

The following table gives details of the admissions :—

1931.	Tuber- culous Disease.	Scarlet Fever.	Diph- theria.	Typhoid and Para Typhoid Fever.	Puer- peral Fever and Pyrexia.	Whoop- ing Cough.	Measles	Other Con- ditions.	Total.
Chester ...	23	59	83	...	5	2	1	15	188
County of Cheshire	6	...	...	...	...	...	...	...	6
Chester R.D.C.	...	17	26	...	...	...	...	1	44
Tarvin and Malpas	...	35	39	...	...	...	...	5	79
Hoole ...	...	12	9	...	...	...	...	...	21
Military ...	...	1	...	...	...	..	...	...	1
Other Authorities	...	3	11	2	...	...	...	2	18
Total ...	29	127	168	2	5	2	1	23	357

9. *Maternity Nursing Homes.*—There are six maternity nursing homes in Chester, five of which also take other patients, the sixth is the Chester Maternity Hospital. They have been visited during the year and the registers examined. There have been no new applications and no cancellations. In addition to those, exceptional midwifery is done at the Chester Royal Infirmary. There are also 12 maternity beds at the City Hospital, which are being used to an increasing extent. There are also 8 maternity beds in the Chester Maternity Hospital. This Hospital admitted 208 cases during the year. They had no case of puerperal fever, but one maternal death, a case of ante-partem eclampsia. There were 8 still births, the causes being faulty presentation 3, ante-partem hæmorrhage 2, health of mother 1, congenital

defect 1, and in one the mother had been involved in a motor accident shortly before delivery. There were also three premature births, all apparently due to the defective health of the mother.

In the City Hospital 42 cases were delivered during the year. There were two cases of puerperal fever and one of puerperal pyrexia.

10. *Maternal Mortality*.—Enquiry is made into the circumstances of all cases of puerperal fever or pyrexia including a statement from the doctor and nurse attending. The nurse in attendance is limited to the case until recovery or removal to hospital when she and her implements are disinfected before returning to duty.

11. *Institutional provision for unmarried mothers, illegitimate children and homeless children*.—Unmarried mothers may be admitted to the Chester Maternity Hospital or to the City Hospital. The only provision made for homeless children is through the Public Assistance Committee. Illegitimate children are kept under supervision and if not kept with the mother are subject to special care as to their homes and surroundings.

12. *Institutional provision for the mentally defective*.—Chester is under the necessity of sending its mentally defectives to whatever institution signifies a willingness to take a case. Arrangements have been made at the City Hospital to use a block for lower grade female defectives and 34 cases are treated there. The scheme which was in progress for the provision of an institution for 1,000 beds to serve the County of Cheshire, Birkenhead, Wallasey and Chester, has been modified. It is hoped, however, that within the next six months Chester will have about 6 beds available for low grade cases in this institution.

13. *Ambulance Facilities*.—Two ambulances are provided by the Town for general purposes, and are kept at the Fire Station where a driver is always available. For infectious diseases, two ambulances are kept at the Fever Hospital and also a van for the removal of infected bedding. The ambulance driver resides at the Hospital.

14. *Clinics and Treatment Centres*.—The following clinics are administered by the Local Authority :—

	Situation.		Accommodation.
1. Maternity and Child Welfare Clinic	Princess Street ...		Waiting room, weighing room, and consulting room
2. Ante-Natal Clinic ... ..	„		Same
3. School Clinic (inspection) ...	„		„
4. School Clinic (treatment) ...	„		„
5. Ultra Violet Ray Clinic ...	„		„



	Situation.	Accommodation.
6. Tuberculosis Clinic	... St. John Street ...	Waiting room and consulting room
7. Venereal Disease Centre (Joint with Flint & Cheshire)	... Chester Royal Infirmary	Waiting room, treatment room, and ablution room
Under the auspices of the Cheshire Branch of the Red Cross Society and Society of St. John of Jerusalem a local Committee administer the		
8. Orthopædic After Care Clinic	St. John Street ...	Waiting room and Doctor's room

Some details of the work done in these Clinics are given below—

(1) The Maternity and Child Welfare clinic meets twice a week under the charge of a medical practitioner. The babies and older children are regularly weighed and records of progress kept. Where and when necessary they are seen by the doctor who advises the parents. Two of the Health Visitors attend each meeting and advise the mothers on various health matters.

The following attendances were made during the year.

	Number.	Attendances.
Mothers .....	405	3353
Babies .....	243	2085
Children (1—5 years) .....	139	1392
		Welghings.
Babies .....		1909
Children .....		1340

The following work was done by the medical officer of the clinic—

First visits of infants .....	235
Subsequent visits .....	895
Children (1—5 years) first visits .....	103
Subsequent visits .....	447
Mothers (post-natal consultations) .....	66

For weakly children and for those debilitated through whooping cough, cod liver oil has been supplied freely and has been very valuable. There is a growing interest and endeavour on the part of parents to feed their children correctly from the start and to follow intelligently instructions given regarding diet and management.

(2) The Ante-Natal Clinic meets once a week under the charge of the same medical officer as the Child Welfare Clinic. Expectant mothers are examined and advised, and the midwife or doctor interested in the case, if not present, is written to. During the year the medical officer has seen 116 expectant mothers, an increase of 26 per cent.

over last year, and representing 17.2 per cent. of the births. More cases have been referred to the clinic by midwives for measurement, especially primiparae. We have also sent to hospital some of those cases where home conditions were unsuitable as well as those requiring special treatment.

(3) The School Clinic (Inspection) meets every school day and is in charge of the Assistant School Medical Officer.

(4) The School Clinic (Treatment) meets on Tuesdays, Wednesdays and Fridays, and is in charge of the same medical officer. At both clinics a school nurse is in attendance.

(5) Ultra Violet Ray Clinic :—

Total number attending during the year .....	77
Children under school age .....	53
Children of school age .....	19
Adults .....	5

Total number of attendances made ..... 1286

Average number of attendances of each patient ..... 16.7

Summary of conditions of children under school age :—

Debility and malnutrition .....	24
Rickets .....	22
Organic Heart Disease .....	1
Tuberculous Neck Glands .....	2
Tuberculosis of Abdominal Glands .....	1
Tuberculous dactylitis .....	1
Tuberculosis of Hilar Glands .....	1
Tetany .....	1

Summary of conditions of school children :—

Debility .....	12
Tuberculous Neck Glands .....	4
Eneuresis .....	2
Backward Child .....	1

Summary of conditions of adults :—

Tuberculous Neck Glands .....	3
Lupus of Leg .....	1
Alopecia Areata .....	1

The results of the treatment at the Ultra Violet Ray Clinic continue to justify it. The majority of cases were definitely improved after treatment. This is especially noticable in the cases of debility and malnutrition in children under five. All these cases uniformly

increased in weight and in general condition. Their appetites increased and combined with advice as to feeding the results of ultra violet irradiation were very satisfactory.

In the cases of tuberculosis there was a very marked improvement in and finally cure, of the case of tuberculous dactylitis. At the end of treatment the swelling of the fingers had entirely disappeared, and movements were fully re-established. Two of the cases of neck glands were so advanced before attending for treatment that finally they had to be operated upon and a complete excision made. In earlier cases the glands eventually subsided under treatment. An improvement in the condition of school children referred for debility was noted after treatment. The backward child was under treatment for a considerable time but at the end of treatment his speech was improved, his general health excellent and his school teacher reported an improvement in his work. Of the cases of enuresis, one showed slightly improvement while the other was stationary after treatment. Treatment of the conditions in adults showed uniformly good results. The cases of neck glands after treatment were satisfactory. The glands practically disappeared and no abscess formation was found.

The case of lupus, after one or two relapses, improved, and the general inflammation which had been present, subsided. The hair in the case of Alopecia areata appeared after a few exposures, and at the end of the course of treatment was comparatively thick.

(6) Tuberculosis Clinic meets on Mondays and Thursdays at 11 o'clock and on Thursday evenings at 6 p.m.

The number of patients on the Dispensary Register at the end of the year was .....	195
Number of new cases examined .....	71
Number of contacts examined .....	6
Number of attendances at the Dispensary.....	211
Number of attendances at Cheshire Joint Sanatorium for refills in artificial pneumothorax .....	108
Number of visits of Tuberculosis Officer to homes .....	48
Number of " T.B. Plus " cases on the Register .....	87
Number of visits of nurses to tuberculous persons (including those under the tuberculosis regulations) .....	866

(7) Venereal Disease Centre meets at the Royal Infirmary on Mondays and Wednesdays at 5—7 p.m., Thursdays at 3 p.m., and Saturdays 12—2 p.m., and is staffed by members of the Senior Staff of the Infirmary. The Clinic is open all day for irrigations and trained assistants are in attendance. The Clinic is a joint one for Chester and the Counties of Cheshire and Flint.

The number of patients treated at the Clinic are given below :—

	Syphilis.		Gonorrhœa.		Total.	
	M.	F.	M.	F.	M.	F.
Number of cases at beginning of year	92	74	125	35	217	109
Number attending for first time 1931	35	21	94	30	129	51
Ceased to attend or transferred to other centres .....	28	18	65	20	93	39
Discharged .....	14	10	31	3	45	13
Number under treatment at end of year .....	86	68	123	42	209	110

The following is the number of Chester patients attending for the first time during the year for the last five years :—

	1927	1928	1929	1930	1931
Syphilis .....	20	22	12	16	19
Soft Chancre .....	—	—	—	1	—
Gonorrhœa .....	35	24	38	30	27
Conditions other than venereal .....	7	3	1	10	4

The number of attendances made by Chester patients was 1,296, and the number of in-patient days was 208.

Orthopædic After-Care committee meets once a week when the cases are seen by the specialist staff of Shropshire Orthopædic Hospital. During the year 148 cases were under treatment and they made 1,164 attendances. Deformity from rickets provided most cases—over 40, surgical tuberculosis about 30, and congenital deformities 17. I must again thank the Red Cross Society and the Society of St. John of Jerusalem for their help without which the work could not be carried on.

15. *Local Government Act, 1929.*—No further step has been taken to make a declaration under this Act.

### SANITARY CIRCUMSTANCES OF THE AREA.

*Water Supply.*—Chester continues to have an abundant supply of water of excellent quality. Since the introduction of modern methods of purification the standard of purity attained has been remarkably good. The standard taken is the absence of typical *Bacillus Coli* from 100 c.c. of water and this during 1931 was reached in 95.8 per cent. of the samples examined. The examinations are made fortnightly throughout the year. A further safeguard will be in force by the end of the year when the 9,000,000 gallon storage reservoir will be put into use.

The percentage of samples showing the absence of *bacillus coli* in 100 c.c. is given below for the last five years :—

1927	1928	1929	1930	1931
75.0%	96.0%	95.0%	83.4%	95.8%

The water is also examined chemically every month and has given satisfactory results. The results are given below :—

MONTHLY CHEMICAL EXAMINATION OF THE CITY WATER SUPPLY.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Colour ...	—	—	—	—	—	—	Nil.	faintly brown	faintly green	—	—	v. faint green
Opacity ...	—	—	—	—	—	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Reaction ...	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.	Alk.
Chlorides as Cl.	1.8	1.5	1.9	1.8	1.8	1.4	2.3	1.5	1.2	1.9	1.8	1.4
Nitrates as N.	—	—	—	—	—	—	—	—	—	—	—	—
Nitrites as N	—	—	—	—	—	—	—	—	—	—	—	—
Total Oxidised Nitrogen	—	—	—	—	—	—	—	—	—	—	—	—
Free Ammonia as $\text{NH}_3$	.012	.014	.0053	.0026	.0026	.0026	.004	.0045	.004	.0024	.0060	.0053
Albuminoid Ammonia as $\text{NH}_3$	.013	.013	.0058	.0126	.010	.0155	.0058	.0162	.017	.0105	.0125	.0090
Oxygen absorbed in 3 hours at $37^\circ\text{C}$	.150	.143	.071	.128	.146	.148	.077	.0308	.043	.196	.195	.056
Hardness—Temporary	2.5	.9	1.0	2.0	1.0	1.5	1.0	2.8	1.2	1.2	1.5	1.0
Hardness—Permanent	5.0	5.6	7.0	6.0	7.5	5.5	7.0	4.1	3.0	7.1	6.0	6.3
Hardness—Total	7.5	6.5	8.0	8.0	8.5	7.0	8.0	6.9	4.2	8.3	7.5	7.3



The water supply is laid on to practically all the houses in Chester. Those not having a separate and internal supply are estimated to be about 180 and are mostly property which it is hoped will be dealt with in the near future under the Housing Acts.

*Rivers and Streams.*—The River Dee, the Shropshire Union Canal and Finchetts Brook pass through the City. The river is known to be polluted by towns higher up the river, but is still a good fishable river. The present financial position has delayed the making of an order constituting a River Board for the Watershed of the Dee, but it is hoped that this will come into operation as soon as circumstances will admit.

The storm overflows which discharge within the City are still offending and ought to receive attention. The Canal and Finchetts Brook give no trouble.

*Drainage and Sewerage.*—Large schemes of sewerage and drainage are still in progress in connection with housing estates and the extension and modernisation of the Sewage Disposal Works.

*Closet Accommodation.*—The only houses in Chester with earth or pail closets are a few beyond the sewered area and two or three too low to allow of drainage. Those all together, do not exceed 40 in number.

*Scavenging.*—The method of refuse removal is satisfactory, but the disposal is made somewhat difficult by the large amount of paper and other light combustible material. If householders would burn such matter the disposal of refuse would be much easier and could be done in the Bradford system, without nuisance. A small charge for the removal of trade refuse would also materially help matters.

### **SANITARY INSPECTION OF THE AREA.**

The following is a classified statement of the work done in the Sanitary Department during the year :—

Complaints in respect of nuisances .....	216
Visits in respect of nuisances .....	393 <sup>0</sup>
Rooms disinfected after Infectious Diseases .....	33 <sup>2</sup>
Investigations into Infectious Diseases .....	204
Matters referred to City Surveyor .....	3 <sup>0</sup>
Tests applied to drains .....	394
Number of premises—	
drains found defective .....	129
drains repaired .....	5 <sup>1</sup>
insufficient drainage .....	3 <sup>1</sup>
drainage systems reconstructed .....	47



Ashpits abolished .....	24
Ashbins provided .....	53 <sup>1</sup>
Inspection of Courts .....	133
Inspection of Schools .....	29
Inspection of Stables, etc. ....	80
Inspections of Canal Boats .....	130
Inspections of Factories and Workshops .....	164
Inspections of Dairies, Cowsheds and Milkshops .....	239
Inspections of Slaughterhouses .....	1480
Inspections of Butchers Shops .....	375
Inspections of Fishmongers Shops .....	266
Inspections of other food shops .....	457
Inspections of Offensive Trade Premises .....	12
Smoke observations .....	63
House to House District Inspections .....	157
Visits to Common Lodging Houses .....	13
Dwellings, Inspections and Re-inspections .....	5728
Visits in respect of Rat Nuisances .....	1023
Visits to Licensed Premises .....	170

The following notices were served for the abatement of nuisances :—

Intimation .....	982
Statutory .....	50

*Legal Proceedings.*—Proceedings were instituted in two cases for failure to comply with Statutory Notices. One was in respect of the non-provision of a sanitary dustbin and the other causing a nuisance arising out of the overcrowding of a dwelling. For failing to supply a dustbin, the defendant was fined £1 and costs. The defendant in the case of overcrowding was allowed twenty-four hours to vacate the premises and ordered to pay 7/6d. costs.

### SMOKE ABATEMENT.

There were 63 smoke observations made during the year, but it was not found necessary to institute any legal proceedings.

Occasionally black smoke was observed but the duration of its emittance was not such as to warrant action other than calling the attention of the person in charge. In several instances the Inspectors found that the smoke-consuming apparatus fitted to the furnaces were not in use. A warning had the desired effect.

One factory which burns oil fuel has given cause of complaint, not owing to smoke, but from the disagreeable smell of burnt oil.

Various efforts have been made to get over the trouble, but without success. Electric power could be supplied by the Corporation, but satisfactory terms cannot be arranged.

### RATS AND MICE DESTRUCTION ACT, 1919.

A considerable amount of work is done in the destruction of rats and rendering premises rat proof. It would increase the value of the work done if the neighbouring authorities were also energetic in the work. National rat week was held in the beginning of November and the co-operation of the larger works and employers of labour was secured. The public were also invited to help and traps were loaned and poison baits given. Apart from the fact that the poison baits were freely taken and that they are generally effective, it is difficult to get evidence as to the number of rats killed. Apart from rat week, well over 1,000 rats were trapped during the year beside those which had succumbed to poison laid in the daily work.

Month 1931.	No. of Visits.	Method.		Rats Caught
		Poison	Traps.	
January ... ..	104	24	81	128
February... ..	121	26	104	161
March ... ..	129	39	86	183
April ... ..	100	23	78	145
May ... ..	86	11	76	137
June ... ..	96	25	64	109
October ... ..	55	7	26	59
November ... ..	126	20	60	92
December ... ..	167	39	93	83
TOTAL ... ..	984	214	668	1097

### PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS OR REGULATIONS.

#### WHOLESALE DEALERS IN MARGARINE AND MARGARINE CHEESE.

The number of registered dealers remains the same as last year. The premises on inspection were found to be satisfactory.

#### FRIED FISH SHOPS.

There are 32 shops in which this trade is carried on. The premises have been regularly inspected and found satisfactory.

#### RAG FLOCK ACTS.

Two samples of rag flock were examined and found to comply with the prescribed standard. The rag flock used in the City is of good quality and it is bought under warranty. In no case was old flock found to be used in the manufacture of bedding, etc.

### COMMON LODGING HOUSES.

No change has taken place in the circumstances relating to common lodging houses. There are four on the register, three of which are regularly used as common lodging houses, in the other case it is used more as a house let in lodgings.

The accommodation provides for 145 men. There is no common lodging house accommodation for women.

Thirteen visits were made during the year.

### SANITARY CONDITION OF SCHOOLS.

Besides the routine inspection of the premises by the School Medical Officer, the District Inspectors made 29 visits during the year. Several minor defects were found and remedied. The lower playground at St. Thomas's which was reported defective last year has not been repaired, and the boys playground at St. Paul's is also defective. The lighting of this school, St. Paul's, is defective, and ought to be improved.

### HOMEWORKERS.

Fourteen outworkers were notified by employers and their homes visited by the staff. The conditions were satisfactory. Eight were employed in tailoring and the remainder in boot and shoe repairing.

### PUBLIC CONVENIENCES.

The new conveniences in City Road have been completed and are in use. The conveniences are well looked after, but there are still a few which it is difficult to keep in quite a satisfactory condition. In particular, one at Watergate is apt to give trouble and ought to be moved and modernised. So far the search for a suitable site for one in Boughton has not been successful.

### LICENSED PREMISES.

Sanitary improvements have been made in a number of these premises necessitating 170 visits for the purpose of supervision.

Improvements have been made in the sanitary accommodation for both sexes, and in one case the living accommodation of the licensee has been extended and improved. Two cases outstanding last year have been dealt with.

### CANAL BOATS ACTS, 1877, 1884.

There were two boats removed from the register and one added, leaving 281 on our books at the end of the year. One hundred and thirty boats were inspected and seven contraventions found affecting three boats. Those were made good after service of notice. The

accommodation on the boats inspected provided for 453 persons and the number actually occupying was 395—175 adult males and 103 adult females. There were also 67 children of school age and 50 children under school age.

The following table shows the work done under the Acts.

CANAL BOATS ACTS, 1877 AND 1884.

Number of Boats added to Register in 1931 .....	1
Number re-registered owing to Structural Alterations .....	—
Number re-registered owing to other reasons .....	—
Total number registered to 31st December, 1931 .....	283
Total number of registrations cancelled .....	2
Actual number of Boats on register at 31st December, 1931 .....	281
Number of Boats inspected in 1931 .....	130
Number of Boats conforming to the Acts and Regulations .....	127
Number of Boats infringing the Acts and Regulations .....	3
Total number for which the Cabins were registered .....	453
Total number occupying the Cabins .....	395
Details of Occupation :—	
Male Adults .....	175
Female Adults .....	103
Children of School Age .....	67
Children under School Age .....	50

Details showing numbers infringing in respect to :—

No of Cases met with.		No of Cases Remedied.
—	Registration .....	—
—	Notification of change of master .....	—
—	Absence of certificate .....	—
1	Certificate not identifying owner with boat .....	1
1	Marking .....	1
—	Overcrowding .....	—
—	Partition (Regn. 8, b. ii.) .....	—
—	Females over 12 improperly occupying .....	—
—	Cleanliness .....	—
2	Painting .....	2
—	Ventilation .....	—
2	Dilapidation .....	2
—	Removal of bilge water .....	—
—	Without pump .....	—
—	Refusal of admittance of Inspector .....	—
1	No proper Water Vessel .....	1
—	Without requisite double bulkheads .....	—



No. of Cases met with.		No. of Cases Remedied.
—	Non-notification of infectious disease .....	—
—	Number of boats detained for cleansing (not for I/D.) .....	—
7	Total cases met with.                      Total cases remedied	7
—		—
	Number of Legal Proceedings taken .....	—
	Number of printed Notice Forms issued .....	3
	Number of Notices attended to .....	3
	Number still corresponding about .....	—

### HOUSING.

There were 157 houses inspected and recorded under the Housing (Consolidated) Regulations, 1925. Of that number, 24 were found satisfactory and the remaining 133 were dealt with as follows:— 61 were repaired by the owners as a result of informal action, and 7 were outstanding at the end of the year. The remaining 65 were surveyed in areas which may be dealt with either as clearance areas or improvement areas. In one instance the owner decided to abolish 6 houses owing to the excessive cost of bringing them to a reasonable standard for habitation. In this case although 6 houses were demolished, orders were made only on five.

During 1931 the following houses, on which closing orders were outstanding, have been demolished, having been dealt with under the Housing Act, 1930:—

Kiln Court .....	4 houses
Kiln Yard .....	5 „
Flolliotts Court .....	8 „
Davies Court, Newgate Street .....	2 „
Bodens Court, Crane Street .....	4 „

Number 2, Kiln Yard, although a demolition order has been passed, has been allowed to stand for the safety of its neighbour.

Four houses in Northgate Terrace have been demolished without the necessity of serving demolition orders, the site having been purchased by the Local Authority for the erection of a transformer station.

Two houses in Bedward Court were demolished by the owner.

Under the Housing Act, 1930, 6 houses in Commonhall Street were surveyed and subsequently demolished.

In the following instances written undertakings have been made by the owners not to use the property for human habitation. The undertakings have been accepted by the Housing Committee—

- 1 and 3, Potters Court, Castle Street.
- 8a, Brook Place.

A closing order was made on Nos. 7 and 9, Chapel Lane, and on the owner converting the two houses into one, the order was determined.

The houses mentioned below which have been closed for human habitation are still in abeyance in respect of demolition orders:—

- 2 and 3, Jones Court, Princess Street.
- 2, 3, 4 and 5, Frances Court, Cuppin Street.
- 13 and 14, Princess Court, Trafford Street.
- 1, Fluitts Court, Cuppin Street.
- 1 and 3, Spital Walk.
- 2, 3, 4, 5 and 9, Richmond Court, Spital Walk.
- 1, 2, 3 and 4, Owens Court, St. Olave Street.
- 2, 4, 6 and 8, St. Olave Street.

The following statutory notices were served incidental to the work under the Housing Act, 1930:—

Form A.—Requests for names and addresses of persons having control or interest in dwellings .....	69
Notice of intention to survey buildings .....	77
Form 4.—Notice of question of making demolition Orders ...	137
Form 5.—Orders for demolition .....	75
Form 7.—Notice to occupiers of demolition orders becoming operative .....	5
Total ...	363

Apparently the simplification of procedure leads to a multiplication of notices and increased work.

(a) *Housing Statistics*—

1. *Inspection of dwelling houses during the Year*—

- (1) (a) Total number of dwelling houses inspected for housing defects (under Public Health or Housing Acts) ..... 1244
- (b) Number of inspections made for the purpose ..... 5728
- (2) (a) Number of dwelling houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ..... 157
- (b) Number of inspections made for the purpose ..... 1702
- (3) Number of dwelling houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ..... 65
- (4) Number of dwelling houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation 1032



2. *Remedy of defects during the year without service of formal notices :*  
 Number of defective dwelling houses rendered fit in consequence of informal action by the Local Authority or their officers ..... 963
3. *Action under Statutory Powers during the year :—*
- A.—Proceedings under sections 17, 18 and 23 of the Housing Act, 1930 :—
- (1) Number of dwelling houses in respect of which notices were served requiring repairs ..... nil
- (2) Number of dwelling houses which were rendered fit after service of formal notices—
- (a) By owners ..... nil
- (b) By local authority in default of owners ..... nil
- B.—Proceedings under Public Health Acts—
- (1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied ..... 50
- (2) Number of dwelling houses in which defects were remedied after service of formal notices—
- (a) By owners ..... 50
- (b) By local authority in default of owners ..... nil
- C.—Proceedings under sections 19 and 21 of the Housing Act, 1930 :
- (1) Number of dwelling houses in respect of which Demolition Orders were made ..... 28
- (2) Number of dwelling houses demolished in pursuance of Demolition Orders ..... 27
- D.—Proceedings under section 20 of the Housing Act, 1930 :
- (1) Number of separate tenements or underground rooms in respect of which Closing Orders were made ..... nil
- (2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined the tenement or room having been rendered fit ..... nil
- E.—Proceedings under section 3 of the Housing Act, 1925 :—
- (1) Number of dwelling houses in respect of which notices were served requiring repairs ..... nil
- (2) Number of dwelling houses which were rendered fit after service of formal notices—
- (a) By owners ..... nil
- (b) By local authority in default of owners ..... nil

- (3) Number of dwelling houses in respect of which Closing Orders became operative in pursuance of declaration by owners of intention to close ..... nil

F.—Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925—

- (1) Number of dwelling houses in respect of which Closing Orders were made ..... nil
- (2) Number of dwelling houses in respect of which Closing Orders were determined, the dwelling houses having been rendered fit ..... nil
- (3) Number of dwelling houses in respect of which Demolition Orders were made ..... nil
- (4) Number of dwelling houses demolished in pursuance of Demolition Orders ..... nil

(b) 1. *Housing Conditions*.—According to the rate books there are 9,197 houses in Chester and about 7,000 of those would be houses for the working classes. Practically all houses have an individual indoor water supply and drainage, and the great majority separate closet accommodation. A considerable proportion fall short of the requirements set out in the Manual of Unfit Houses, but generally from general dilapidations and not from lack of necessary sanitary requirements. Proper means of storing food is a common deficiency.

2. (a) *Sufficiency of Supply of Houses*.—The resident population of Chester is 41,380, and the number of inhabited houses 9,895, which gives an average of 4.18 persons per house. This does not indicate any overcrowding and infers that there is a sufficiency of houses. We know, however, that there is very considerable overcrowding both physical and moral, from more than one family living in a house and families living in houses too small for them.

(b) The rate of growth of the population of Chester is materially lessened during the last ten years. This is due apparently to the migration of many residents to areas just outside our boundaries. Those people have their business and shopping interests in Chester, but have migrated to where houses are available for them.

(c) There is still within our boundaries abundant land for industrial purposes, but on the completion of the present contracts for cottages the land suitable for such purposes will be exhausted.

3. *Overcrowding*.—(a) The position as to overcrowding has not altered during the year. In 423 houses inspected for one reason or

another during the year, the average number of inhabitants was 5.4 per house. This figure is somewhat higher than that found amongst workmen's dwellings last year. I do not consider, however, that the overcrowding is worse this year than last. There should be a marked improvement in this respect in a year's time when the houses at present under construction become available.

(b) *Causes*.—The chief cause of overcrowding is the shortage of houses. Many people at present living in lodgings are paying rent for one room nearly equal to that of a cottage, and are willing and anxious to get a cottage when available. To a less extent overcrowding is due to families living in houses too small for them, while being able to pay for a larger house.

(c) Owing to the lack of houses no action can be taken to lessen the overcrowding, although it is sometimes possible to get a member of a family to sleep in a neighbour's or relative's house.

4. *Fitness of Houses*.—The procedure for assuring the fitness of houses was detailed in last year's report, and it is needless to repeat it.

5. *Unhealthy Areas*.—No action has been taken to deal with any area either as an unhealthy area or clearance area as there has not been alternative accommodation available. It is hoped, however, during the current year to deal with one small area. Until the greater number of those living in lodgings are provided with houses it will be impossible to do much in the way of clearing unsatisfactory areas.

6. *Bye-laws relating to houses, houses let in lodgings, and to tents, vans, sheds, etc.*—There are no housing bye-laws in Chester. It would be an advantage if the Local Authority had power to issue or withhold a certificate of fitness for habitation as houses are occasionally erected which prove unsatisfactory in a very short time, noticeably in the lack of efficient damp-proof courses.

Power has been taken in the Chester Corporation Act, 1929, to make bye-laws dealing with houses let in lodgings, and with tents, vans, sheds, etc. These bye-laws have not yet been made.

## **INSPECTION AND SUPERVISION OF FOOD.**

(a) *Milk Supply* :—

There are 14 milk producers within our area and their premises have been regularly inspected. In addition to the visits by the District Sanitary Inspector, the Corporation Veterinary Officer visits each farm twice yearly and inspects the cattle individually. In cases of doubt the milk producers frequently call for the services of the Veterinary Officer. In this way care is taken of the milking stock in the City.

As a result of the visits of the Veterinary Surgeon six cows were dealt with under the Tuberculosis Order, 1925. Six samples of milk were sent to the Pathological Department, Chester Royal Infirmary, for biological examination, and these were reported to be free from tubercle bacilli. The District Sanitary Inspector made 29 visits for the purpose of inspecting the shippens and dairy premises, and their condition was found satisfactory.

There are 119 persons registered as milk sellers in the City. Of these, 72 persons have dairy premises outside our area. The inspection of the latter premises is in the hands of the authorities in the respective areas.

*Cleanliness of Milk.*—One hundred and forty-four samples of milk have been examined for the number of bacteria present. Of those 87.5 per cent. were found satisfactory. This is not so satisfactory as last year when the percentage was 91.7. It is evident that many producers and purveyors of milk neither understand nor practice the methods of clean milk production. In view of the fact that details of such a method are sent to every producer or purveyor of an unsatisfactory sample there ought to be a more sustained improvement than is shown by the figures given below. Expensive apparatus or elaborately fitted shippens are not necessary to attain this, but strict attention to simple rules of cleanliness are essential.

Year.	Percentage of Satisfactory Samples.
1926	74.6
1927	89.2
1928	88.4
1929	75.8
1930	91.7
1931	87.5

Only 12.5 per cent. of the samples showed the absence of bacillus coli in 1 c.c. or less. Certified Tuberculin Tested, Grade A and Pasteurised Milk are all sold in the City, but only Grade A is produced within our area. The examination of those milks shows that they are carefully produced.

# BACTERIOLOGICAL EXAMINATIONS OF MILK, 1931.

37

1931. MONTH.	GERMS PER 1 C.C.							Number Letters sent.	BACILLUS COLL.		
	Under 50,000.	50,000 and under 100,000.	100,000 and under 250,000.	200,000 and under 500,000.	500,000 and under 1,000,000.	1,000,000 and over.	Total Examined.		Present in 1'0 c.c. or less.	Present in 1'0 c.c. absent in 0'1 c.c.	Absent in 1'0 c.c. and less.
January	...	1	1	...	...	...	16	...	10	6	...
February	...	...	...	1	...	...	16	1	4	8	4
March	...	...	2	1	...	...	16	2	8	6	2
April	...	...	1	...	1	...	8	1	4	4	...
May	...	...	...	...	...	...	4	...	1	...	3
June	...	4	1	...	1	1	12	2	9	2	1
July	...	...	...	1	1	...	4	2	3	...	1
August	...	...	...	...	2	1	8	3	5	...	3
September	...	3	1	1	3	...	12	4	9	2	1
October	...	2	1	1	1	...	16	2	8	8	...
November	...	3	...	1	1	...	16	2	11	4	1
December	...	4	...	...	...	...	16	...	10	4	2
Totals	102	17	7	6	10	2	144	19	82	44	18
Percentages	70'83%	11'80%	4'86%	4'16%	6'94%	1'39%	...	13'19%	56'94%	30'55%	12'50%



### CHEMICAL EXAMINATION OF MILK.

There were 34 samples of milk chemically examined, of which one sample was certified to be deficient in 1.3 per cent. of fat. The small deficiency was considered by the Public Health Committee and resulted in a letter being sent to the vendor, calling attention to the result of the analysis.

There was a slight improvement in the quality of the milk as compared with that of last year. The average composition of the 34 samples was fat 3.64 per cent., solids not fat 8.78 per cent., as compared with 3.54 per cent. and 8.73 per cent. in 1930.

The following table gives the results of the separate analyses :—?

Date 1931.	Sample No.	Fat per cent.	Solids not Fat per cent.	Date 1931.	Sample No.	Fat per cent.	Solids not Fat per cent.
Jan. 29	7	4.84	8.50	June 24	55	3.40	8.80
"	8	3.60	8.94	"	56	3.70	8.50
"	9	3.98	9.28	"	57	2.96	8.64
"	10	4.20	8.60	"	58	3.20	8.54
"	11	3.22	8.50	"	59	3.50	9.20
"	12	3.14	8.66	"	60	3.60	8.51
Feb. 23	13	4.18	8.92	June 29	61	3.60	8.80
"	14	3.50	9.14	"	62	3.39	8.73
"	15	3.70	8.62	"	63	3.63	8.81
"	16	3.80	8.66	"	64	3.60	8.78
"	17	3.52	8.62	"	65	4.00	8.64
"	18	3.62	8.78	"	66	3.80	8.80
May 19	43	3.48	8.80	"	67	3.93	8.63
"	44	3.80	8.90	"	68	3.30	8.50
"	45	3.72	8.88	Sept. 22	87	3.52	9.16
"	46	3.60	8.80	"	88	3.87	9.15
"	47	3.92	8.88				
"	48	3.00	8.90				

*Average :—Fat = 3.64%. Solids not Fat = 8.78%.*

### MILK AND DAIRIES ORDER, 1926.

Details of work done under this Order are as follows :—

Registered Cowkeepers .....	14
Inspection of Cowsheds .....	84
Contraventions .....	11
Contraventions remedied .....	11
Nature of Contraventions in Cowsheds :—	
Need of limewashing .....	6
Defective drain .....	1
Defective paving .....	2
Unsuitable accommodation .....	1
Water Supply .....	1

Total number of registered milk sellers .....	119
Registered Dairies (including those attached to cowsheds) .....	47
Registered Purveyors of milk (not occupying dairies in the City) ...	72
Dairy inspections (City) .....	155
Contraventions .....	nil

*Meat.*—During the year two registered slaughterhouses have been closed under the powers vested in the Chester Corporation Act, 1929, Section 189. The premises had become redundant and the persons using same have the opportunity of using the Public Abattoir. There now remains in the City 6 slaughterhouses, 3 of which are registered and 3 licensed. With the exception of one registered slaughterhouse, the premises do not call for any action. At the year end negotiations were in progress for the closing of the premises considered unsatisfactory.

The Public Abattoir is leased by the Corporation and the terms of the lease expire in 1935. During the year there were 11,763 animals slaughtered in comparison with 10,256 in 1930. Notwithstanding the increase in slaughtering, the capacity of the premises has not been overtaxed.

The concentration of slaughtering facilitates meat inspection. Meat marking continues to be a routine practice at the Abattoir.

All animals slaughtered in the City are first stunned by mechanically operated instruments,

During 1931 the number of animals slaughtered in the Public Abattoir was :—

Cattle .....	1231
Calves .....	424
Sheep .....	9150
Pigs .....	958

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Total ... 11763

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For the purposes of food inspection the following visits were made :—

Slaughterhouses (not including Abattoir) .....	1480
Butchers shops .....	375
Fishmongers shops .....	266
Other shops and stores .....	457
Total ...	<u>2578</u>

With reference to the Abattoir, there is a qualified meat inspector in regular attendance who assists in the inspection.

The following is a list of food condemned with reasons for action :—

ARTICLES CONDEMNED.	Number.	REASON FOR CONDEMNATION.
<b>BEEF.</b>		
Carcases and offal... ..	24	Generalised Tuberculosis
Portions of carcases and organs ...	293	Localised Tuberculosis
" " " " " " " " " " " "	105	Parasitic & other conditions
Portion of Carcase ... ..	1	Contusion.
<b>MUTTON AND LAMB.</b>		
Carcases and offal ... ..	4	Febrile
" " " " " " " " " " " "	3	Oedema
Organs ... " ... ..	348	Parasitic conditions
<b>PORK.</b>		
Carcases and offal ... ..	8	Generalised Tuberculosis
" " " " " " " " " " " "	5	Febrile
Carcase and offal ... ..	1	Jaundice
Portions of carcases and organs ...	289	Localised Tuberculosis
" " " " " " " " " " " "	23	Parasitic & other conditions
<b>VEAL.</b>		
Carcase and offal ... ..	1	Scour
<b>MISCELLANEOUS.</b>		
Strawberries (Basket) ... ..	1	Decomposition
Cod (lbs.) ... ..	280	"
Kippers (boxes) ... ..	7	"
Plaice (lbs.) ... ..	84	"
Rabbits (carcasses) ... ..	128	"
Hares " ... ..	6	"
Turkeys " ... ..	4	"
Ducks " ... ..	3	"
Grouse " ... ..	3	"
Pheasants " ... ..	2	"
Chilled Beef (portions of carcasses)	4	"
Ham (tins) ... ..	2	"
Ox Tongue (tins) ... ..	2	"

Estimated weight of food stuffs condemned :—10 tons, 19 cwt., 3qrs., 20lbs.

**DISEASES OF ANIMALS ACTS, 1894 to 1925.****TUBERCULOSIS ORDER, 1925.**

The improvement in the class of cattle brought for sale in the Smithfield, noted last year, has been maintained. It was found necessary to serve notices in respect of three animals brought into the cattle saleyard, and there were six head of cattle taken under the Order of 1925 from shippens within the City.

Out of the above, the owner of one animal was ordered to return it from the saleyard to his farm, and due notice of the transfer was given to the Authority concerned so that they would be able to take any necessary action. The Minister of Agriculture and Fisheries was also notified.

The eight remaining animals were slaughtered under the supervision of the Corporation Veterinary Surgeon and the Meat Inspectors, and in each case the animal was found to be affected with generalised tuberculosis and condemned.

Compensation was paid in accordance with the terms of the Order.

Six samples of milk were submitted for biological examination and did not produce tuberculosis in the test animal.

The dairy stock in the cowsheds within the City is inspected by the Corporation Veterinary Surgeon twice yearly. He also makes special examinations on request and attends the cattle saleyards on sale days (Tuesdays and Thursdays) for the purposes of making inspections under the Order.

Legislation is still wanting in respect of additions made to milking stock as there is a possibility of milk being sold from animals which have not been inspected by the Veterinary Surgeon, such cattle being added to the stock during the intervals between the Veterinary Surgeon's visits.

## FOOD AND DRUGS (ADULTERATION) ACT, 1928.

During the year the following articles of food were submitted to the Public Analyst for analysis :—

## FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Article.	Samples Taken	No. formally.	No. informally.	No. Genuine.	No. not Genuine.
Milk ... ..	34	26	8	33	1
Sweets ... ..	7	...	7	7	...
Butter ... ..	6	6	...	4	2
Tea ... ..	6	...	6	6	...
Peas ... ..	4	...	4	4	...
Sausages ... ..	4	3	1	4	...
Apples ... ..	3	...	3	3	...
Baking Powder ... ..	3	3	...	3	...
Cream ... ..	3	...	3	3	...
Condensed Milk ... ..	3	...	3	3	...
Dried Fruit ... ..	3	3	...	3	...
Jams ... ..	3	...	3	3	...
Lard ... ..	3	3	...	3	...
Margarine ... ..	3	3	...	3	...
Mincemeat ... ..	3	3	...	3	...
Self-Raising Flour ... ..	3	...	3	3	...
Rice ... ..	3	...	3	3	...
Brawn ... ..	2	...	2	2	...
Baked Beans ... ..	2	...	2	2	...
Custard Powder ... ..	2	...	2	2	...
Coffee ... ..	2	2	...	2	...
Glacé Cherries ... ..	2	2	...	2	...
Ground Ginger ... ..	2	2	...	2	...
Port Wine ... ..	2	2	...	2	...
Rum ... ..	2	2	...	2	...
Sultanas ... ..	2	2	...	2	...
Whisky ... ..	2	2	...	2	...
White Pepper ... ..	2	...	2	2	...
Fish Paste ... ..	2	...	2	2	...
Lamb's Liver (frozen) ... ..	1	...	1	1	...
Pork and Tongue ... ..	1	...	1	1	...
Totals ... ..	120	64	56	117	3

There were 120 samples examined during the year of which 3 or 2.5 per cent. were certified to be not genuine.

Of the 34 samples of milk examined one, or 2.9 per cent. was found to be below the prescribed standard for fat. The deficiency amounted to 1.3 per cent.

Two samples of butter were certified to contain excess of water equal to 1.4 per cent. and 0.1 per cent. respectively

No legal proceedings were instituted under this Act.



The following table sets out the circumstances relating to the samples adversely reported upon and the action taken in each case.

No. of Sample.	Name of Article.	Result of Analysis.	Result of Legal Proceedings or action taken by the Public Health Committee.
51	Butter ..	Contained 1.4 per cent. excess of water above the standard of 16 per cent. .. ..	} Owing to small percentages of water in excess of standard the Public Health Committee instructed the Town Clerk to inform the vendors of the results of analyses and warn against recurrence.
52	Butter ..	Contained 0.1 per cent. excess of water above the standard of 16 per cent. .. ..	
57	Milk ..	Deficient in fat to extent of 1.3 per cent. .. ..	} Owing to small percentage of deficiency in fat the Public Health Committee instructed the Town Clerk to call attention of vendor to the result of analysis.

I append the report of the City Analyst for the year :—

*To the Chairman and Members of the Public Health Committee.*

#### FOOD AND DRUGS ADULTERATION ACT.

Gentlemen,

I have the honour to inform you that during the past year I received one hundred and twenty samples for analysis.

Three samples were adulterated, namely, a milk sample which was 1.3 per cent. deficient in Fat, and two Butter samples which contained water in excess of the Standard of 16 per cent., the amounts in excess being 1.4 per cent. and 0.1 per cent.

No milk samples were received containing any dirty sediment or preservatives or artificial colouring matters.

A new test has been brought out which is stated by several workers to give conclusive evidence as to whether a milk contains added water or not, the test depends upon the freezing point of the milk and, as it is of great importance in samples taken under the Act to be able to prove definitely that water has been added and that a deficiency in solids is not due to natural causes, I have decided to test this method thoroughly, and if the results are absolutely reliable, to use the test on all doubtful samples.

Boric Acid has not been found in any of the samples but the preservative Sulphur Dioxide was found in Sausages and Dried Fruit, but in no case was the quantity in excess of that allowed by the Regulations.

As mentioned in my Quarterly Report, the need of a standard for Cream and Tinned Cream is shown when Tinned Cream can be sold labelled " Pure Rich Devonshire Cream " and containing only 20 per cent. of fat while the average percentage of fat in genuine Devonshire Cream is 55 per cent. to 60 per cent.

Yours faithfully,

HAROLD LOWE, M.SC., F.I.C.

*City Analyst.*

(d) *Chemical and Bacteriological Examination of Food*.—The chemical examination of food is done by the City Analyst in his own laboratory, and the purity of various articles reported upon. The bacteriological examination of milk is done in the Municipal Laboratory. In cases of suspected food poisoning, samples of the suspected food and other material are sent to Pathological Dept., Bristol University.

(e) *Nutrition*.—Opportunity has been taken to address various organisations both on questions of nutrition and prevention of disease. In this time of great unemployment and hardship it is gratifying to see that the nutrition and well-being of the children are not suffering.

## PREVALENCE AND CONTROL OVER INFECTIOUS AND OTHER DISEASES.

### *General :—*

The year has shown a gradual diminution in the prevalence of both diphtheria and scarlet fever, while other infectious diseases have not been unduly prevalent. The only exception has been whooping cough which became epidemic in early autumn and continued during the winter. Only one death occurred from this cause during 1931, but it was somewhat more fatal in the spring of the current year.

Chickenpox has been prevalent for some years back, but somewhat less so in 1931 than in 1930. Each case coming to the notice of the department is visited and the diagnosis confirmed.

There has not been a case of smallpox.

Diphtheria which was epidemic and virulent for the past two years has materially lessened in both respects. Swabbing of contacts at home and the examination and if suspicious also swabbing of school contacts has been continued.

Immunisation which was started in 1930 has been pressed during the year, and with better results. One school is dealt with at a time. A meeting of the parents is called, when the procedure and the advantages are explained, and at the same time the parents of each child is circularised to the same effect and an acceptance form enclosed which they are asked to sign if agreeable. At the same time the immunisation is offered to children of pre-school age and the parents asked to accept for all their children. In this way 590 children have been immunised either with or without Schick testing, and in addition 269 children were found Schick negative.

The percentage of children either found to be immune or actively immunised in the schools dealt with is given below :—

Grosvenor St. John's .....	30.9
Cherry Grove .....	54.8
St. Mary's, Handbridge .....	29.3
George Street .....	27.4
St. Peter's .....	7.5
St. Thomas's .....	49.4
Blue Coat Boys' School .....	100.0

About one-sixth of the pupils attending the schools dealt with are presumably now immune to diphtheria, although in some schools the figure falls short of this.

Scarlet Fever has been less prevalent and is still, in the great majority of cases, very mild in type .

Two cases of Cerebro-Spinal Fever occurred, one being a visitor who had only been in Chester a few days. No contact with any other suspicious condition could be discovered. Both cases were confirmed bacteriologically. Both cases were young children, one of whom died.

Pneumonia has been less prevalent, 63 cases being notified in place of 102 in the previous year. We continue to admit severe or complicated cases of Measles and Whooping Cough to hospital and a few such whooping cough cases have been admitted during the year.

The Chester and District Nursing Association continue to give help in the home nursing of such conditions.

*Cleansing and disinfection of verminous persons and their belongings.*—A shampoo station is freely used for the cleansing of heads of school children. In the very few cases of body vermin, they are treated at the Disinfecting Station, Isolation Hospital, where clothes and bedding are also treated. Occasionally we are asked to deal with an adult who is then dealt with similarly.

*The position as regards vaccination.*—Recognising the present unsatisfactory position as regards vaccination and smallpox there is at present a suggestion that the Vaccination Acts should be repealed and the protection against smallpox entrusted to the persuasive powers of a Public Health Department.

Smallpox was endemic in this country last century and was gradually abolished after the passing of the Vaccination Act, 1867. The position weakened in 1898 when the conscientious objection clause was introduced and a certificate of objection was made still easier to obtain in 1907. The natural consequence is that vaccination is largely voluntary at present and a large proportion of our population is unprotected.

In 1922 and 1923 a few cases of a form of meningitis following vaccination occurred. These cases were carefully investigated (see Report of Andrews Committee, 1925) and subsequently the Minister of Health published a comprehensive report upon the preparation and standardisation of lymph, on practical methods of diminishing risks and on proposed methods of vaccination. In the Spring of 1931 the Minister of Health also published "A Review of Certain Present Aspects of Smallpox Prevention" in relation to the Vaccination Acts, 1867—1907.

About the same time the Minister also published "Instructions to Public Vaccinators" directing that in place of the old four insertions producing a scar of half-an-inch, vaccination was to be done in future by one insertion, and that by one scratch not exceeding one-quarter of



an inch in length. It was advised also that primary vaccination should not be carried out on children of school age except in the presence of epidemic smallpox or threatened epidemic. The protection afforded by this modified vaccination is recognised as of short duration, and successive re-vaccination at intervals of about five years is recommended.

The effect of these various steps lessening the requirements of the original Act, which stamped out smallpox, and reducing the protection afforded by the old four marks has produced a population largely unprotected against smallpox and the number and degree of protection will rapidly become less.

The occurrence of the few cases of meningitis was responsible for this last lessening of protection. Their occurrence was, however, a direct outcome of the conscientious objection clauses, for practically all the cases were of children unvaccinated in infancy, and in whom primary vaccination was done about school age. If protection against smallpox was desired the proper course was to revert to the powers of the Act of 1867, which did what it was intended to do.

What are our chances of getting better protection by the repeal of the Acts and trusting to persuasion?

We have recently offered immunisation against diphtheria to the parents of about 5,000 children; about a sixth have accepted. Diphtheria is a more fatal disease than the present type of smallpox and parents must have heard of deaths of their children's schoolfellows from this disease. Yet persuasion has succeeded in getting only one-sixth of acceptances.

The repeal of the Vaccination Acts and trusting to persuasion is not likely to lead to satisfactory protection against smallpox. On the other hand the present legal requirements as regards vaccination are of no great value and are expensive.

When the 1867 Act was in force, an outbreak of smallpox was comparatively easily overcome. Now, when the disease is difficult to recognise, and in an unprotected population, the difficulty of overcoming it is very great and leads to great expense to the affected community. It is the community that suffers, the individual can be protected if he chooses.

The position would seem to call for some measure of compulsion at times of epidemic. The size of the problem would cause difficulty in practice, but the difficulties could be overcome.

The incidence of notifiable diseases occurring during the year is set out in the following table :—

# NOTIFIABLE DISEASES DURING THE YEAR 1931.

DISEASE.	Under 1 year.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 10.	10 and under 15.	15 and under 20.	20 and under 35.	35 and under 45.	45 and under 65.	£5 and over.	Total cases.	Cases admitted to Hospital.
Diphtheria ...	1	0	4	3	8	42	23	0	6	3	2	1	93	88
Scarlet Fever ...	1	0	3	5	2	23	14	5	5	0	1	0	59	54
Erysipelas ...	0	0	0	0	0	0	0	0	4	0	4	2	10	2
Puerperal Fever ...	0	0	0	0	0	0	0	1	3	0	0	0	4	3
Encephalitis Lethargica ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid... ...	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Para Typhoid ...	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Small Pox ...	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophthalmia Neonatorum ...	7	0	0	0	0	0	0	0	0	0	0	0	7	7
Puerperal Pyrexia ...	0	0	0	0	0	0	0	0	6	1	0	0	7	6
Chicken Pox ...	6	8	6	12	8	97	14	1	1	0	0	0	153	0
Measles ...	3	5	5	6	5	29	3	0	2	0	0	0	58	1
Whooping Cough ...	12	9	9	12	21	65	4	0	0	0	0	0	132	2
Cerebro Spinal Fever ...	0	2	0	0	0	0	0	0	0	0	0	0	2	2
Pneumonia ...	5	4	2	4	1	4	1	7	8	7	13	7	63	0
Malaria ...	0	0	0	0	0	0	0	0	1	0	0	0	1	0



## TUBERCULOSIS, 1931.

Particulars of new cases of tuberculosis and mortality during 1931 are given below:—

Age Periods.		NEW CASES.				DEATHS.			
		Pulmonary		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
		Males	Females	Males	Females	Males	Females	Males	Females
Under 1	...	0	0	2	1	0	0	4	1
1 to 5	...	2	2	5	3	0	1	4	1
5 to 10	...	0	2	0	3	0	0	1	1
10 to 15	...	0	0	0	0	0	0	0	0
15 to 20	...	2	2	0	0	0	2	0	2
20 to 25	...	4	2	1	1	2	3	1	0
25 to 35	...	9	8	0	1	8	7	0	1
35 to 45	...	6	1	0	0	5	1	0	0
45 to 55	...	3	0	0	0	7	0	0	1
55 to 65	...	2	0	0	0	2	1	0	1
65 and upwards	...	1	1	0	0	0	1	0	0
Totals	...	29	18	8	9	24	16	10	8
1931		47		17		40		18	

PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS)  
REGULATIONS, 1925.

There has been no occasion to act on this regulation.

PUBLIC HEALTH ACT, 1925, SECTION 62.

So far there has been no occasion to put this Section into force.

CAUSES OF DEATH.	NET DEATHS AT THE SUBJOINED AGES OF "RESIDENTS" OCCURRING WITHIN OR WITHOUT THE DISTRICT.										WHETHER	
	At all Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 35.	35 and under 45.	45 and under 55.	55 and under 65.	5 and under 75.	75 and under wards.
1 Typhoid and Paratyphoid Fevers	...	...	...	...	...	...	...	...	...	...	...	...
2 Measles	...	...	...	...	...	...	...	...	...	...	...	...
3 Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...
4 Whooping Cough	...	...	2	...	...	...	...	...	...	...	...	...
5 Diphtheria	...	...	...	2	...	...	...	...	...	...	...	...
6 Influenza	13	2	2	...	...	...	...	1	2	3	1	2
7 Encephalitis Lethargica	1	...	...	...	...	...	...	...	...	1	...	...
8 Cerebro-spinal fever	1	...	1	...	...	...	...	...	...	...	...	...
9 Tuberculosis of Respiratory System	40	...	1	...	...	7	15	6	7	3	1	...
10 Other Tuberculous Disease	18	5	1	4	2	3	1	...	1	1	...	...
11 Syphilis	...	...	...	...	...	...	...	...	...	...	...	...
12 General Paralysis of the Insane, Tabes Dorsalis	3	...	...	...	...	...	...	...	1	1	1	...
13 Cancer, Malignant Disease	66	...	...	...	...	1	2	2	9	21	21	10
14 Diabetes	5	...	...	...	...	1	...	...	...	...	3	1
15 Cerebral Haemorrhage, etc.	34	...	...	...	...	...	...	2	1	4	16	11
16 Heart Disease	103	...	...	...	...	2	3	3	7	19	32	37
17 Aneurysm	...	...	...	...	...	...	...	...	...	...	...	...
18 Other circulatory diseases	20	...	...	...	...	...	...	...	...	4	7	9
19 Bronchitis	24	1	1	...	...	...	...	2	1	4	6	9
20 Pneumonia (all forms)	30	4	4	1	1	1	1	...	5	4	2	7
21 Other Respiratory Diseases	5	2	...	...	...	...	...	2	...	...	...	...
22 Peptic Ulcer	6	...	...	...	...	...	...	1	3	1	...	...
23 Diarrhoea, etc.	5	4	1	...	...	...	...	...	...	...	...	...
24 Appendicitis and Typhilitis	1	...	...	...	...	...	...	...	...	...	1	...
25 Cirrhosis of Liver	3	...	...	...	...	...	...	1	1	...	1	...
26 Other Diseases of Liver, etc.	3	...	...	...	...	...	...	...	2	1	...	...
27 Other Digestive Diseases	15	2	1	3	...	1	1	...	1	3	3	...
28 Acute and Chronic Nephritis	30	...	...	...	...	2	2	2	4	10	5	5
29 Puerperal Sepsis	1	...	...	...	...	...	1	...	...	...	...	...
30 Other Puerperal Causes	2	...	...	...	...	...	1	1	...	...	...	...
31 Congenital Debility, Premature Birth, Malformations, etc.	22	22	...	...	...	...	...	...	...	...	...	...
32 Senility	18	...	...	...	...	...	...	...	...	...	1	17
33 Suicide	4	...	...	...	...	...	...	...	...	2	2	...
34 Other Violence	19	...	1	1	1	...	2	2	1	3	3	5
35 Other Defined Diseases	46	4	...	...	2	2	4	2	4	9	10	9
36 Causes ill defined or unknown	2	...	...	...	...	...	...	...	1	...	1	...
Totals	546	46	15	11	9	21	23	27	51	94	117	122

# Infant Mortality during the Year 1931.

CAUSES OF DEATH.							Total Deaths 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Months	Total Deaths under 1 Year
	All Causes	{ Certified. Uncertified.		Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks					
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken pox ..	..	..	..	..	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough ..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria and Croup ..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis ..	..	..	..	..	..	..	..	..	..	..	..	..
Abdominal Tuberculosis (b) ..	..	..	..	..	..	..	..	..	..	..	..	..
Other Tuberculosis Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (not Tuberculous) ..	..	..	..	..	..	..	..	..	..	..	..	..
Convulsions ..	..	..	..	..	..	..	..	..	..	..	..	..
Laryngitis ..	..	..	..	..	..	..	..	..	..	..	..	..
Bronchitis ..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia (all forms) ..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea ..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis ..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis ..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets ..	..	..	..	..	..	..	..	..	..	..	..	..
Suffocation, Overlying ..	..	..	..	..	..	..	..	..	..	..	..	..
Injury at Birth ..	..	..	..	..	..	..	..	..	..	..	..	..
Atelectasis ..	..	..	..	..	..	..	..	..	..	..	..	..
Congenital Malformations (c) ..	..	..	..	..	..	..	..	..	..	..	..	..
Premature Births ..	..	..	..	..	..	..	..	..	..	..	..	..
Atrophy, Debility and Marasmus ..	..	..	..	..	..	..	..	..	..	..	..	..
Other Causes ..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	..	..	..	14	5	3	..	22	6	7	4	46

Nett Births in the year, legitimate, 638; illegitimate, 33.

Nett Deaths in the year of legitimate infants, 44; illegitimate infants, 2.

# Vital Statistics of Whole District during 1931 and previous years.

51

YEAR	Population estimated to Middle of each Year	BIRTHS			TOTAL DEATHS REGISTERED IN THE DISTRICT		TRANSFERABLE DEATHS		NET DEATHS BELONGING TO THE DISTRICT			
		Un-corrected Number	Nett		Number	Rate	Of Non-residents registered in the District	Of Residents not registered in the District	Under 1 Year of Age		At all Ages	
			Number †	Rate					Number †	Rate per 1000 Nett Births	Number †	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1922	41,451	897	865	20·86	608	14·66	113	77	68	78·6	572	13·79
1923	41,610	829	800	19·22	600	14·41	132	78	69	86·2	546	13·12
1924	41,932	835	816	19·46	578	13·78	116	115	73	89·46	577	13·76
1925	41,922	869	851	20·30	593	14·12	155	128	61	71·6	566	13·5
1926	41,913	873	836	19·94	569	13·31	136	113	67	80·0	546	13·0
1927	42,200	764	697	16·51	552	13·08	139	113	49	70·30	526	12·46
1928	40,982	791	696	16·9	554	13·51	190	103	41	58·9	467	16·8
1929	40,920	805	707	17·25	689	16·83	211	148	55	77·7	626	14·3
1930	40,910	798	667	16·3	616	15·5	172	141	48	71·96	585	13·60
1931	41,380	799	671	16·11	595	14·37	196	147	46	68·5	546	12·47

Area of District in acres (land and inland water), 2,862

No. of inhabited houses, 9,895. Average No. of persons per house, 4·18.

\* Total deaths occurring in Chester whether of residents or non-residents.

† Births and deaths corrected for those births and deaths properly belonging to Chester, but occurring outside the District, or occurring in the District but properly belong outside.

# Administration of the Factory and Workshop Acts, 1901 & 1907

IN CONNECTION WITH

## Factories, Workshops, Laundries, Workplaces, and Homework.

### 1. INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF  
NUISANCES.

Premises. (1)	Number of		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
Factories (including Factory Laundries) ...	63	2	—
Workshops (including Workshop Laundries) ...	101	4	—
Workplaces (other than Outworkers' premises)	—	—	—
Total ... ..	164	6	—

### 2. DEFECTS FOUND.

Particulars. (1)	No. of Defects.			Number of Prosecu- tions. (5)
	Found (2)	Remed'd (3)	Referred to H.M. Inspect'r (4)	
Nuisances under the Public Health Acts—				
Want of Cleanliness ... ..	4	4	—	—
Want of Ventilation ... ..	—	—	—	—
Overcrowding ... ..	—	—	—	—
Want of drainage of floors ... ..	—	—	—	—
Other Nuisances ... ..	5	5	—	—
Sanitary accommodation { insufficient ... ..	1	1	—	—
{ unsuitable or defective ... ..	1	1	—	—
{ not separate for sexes ... ..	1	1	—	—
Offences under the Factory & Workshop Act :				
Other Offences ... ..	—	—	—	—
Total ... ..	12	12	Nil.	Nil

### OUTWORK IN UNWHOLESOME PREMISES.

SECTION 108.

Nature of Work. (1)	Instances. (2)	Notices Served. (3)	Prosecutions (4)
Wearing Apparel.—			
Making, &c, ... ..	Nil	Nil	Nil
Cleaning and Washing ... ..	"	"	"